ONLINE MANAGEMENT INFORMATION SYSTEM FOR SUGAR PALM RESEARCH, INFORMATION AND TRADE CENTER AT CAVITE STATE UNIVERSITY MAIN CAMPUS

THESIS

LEONARDO P. NARTEA JR.

MARK KENET JO F. PRADO

College of Engineering and Information Technology

CAVITE STATE UNIVERSITY

Indang, Cavite

Cavite State University (Main Library)

T6003

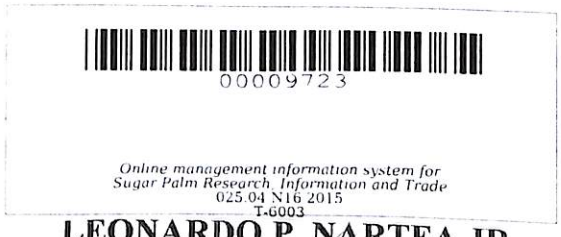
THESIS/SP 025.04 N16 2015

April 2015

ONLINE MANAGEMENT INFORMATION SYSTEM FOR SUGAR PALM RESEARCH, INFORMATION AND TRADE CENTER AT CAVITE STATE UNIVERSITY MAIN CAMPUS

Undergraduate Thesis
Submitted to the Faculty of the
College of Engineering and Information Technology
Cavite State University
Indang, Cavite

In partial fulfillment
of the requirements for the degree
Bachelor of Science in Information Technology


00009723

Online management information system for
Sugar Palm Research, Information and Trade
025.04 N16 2015
T-6003

LEONARDO P. NARTEA JR.
MARK KENET JO F. PRADO
April 2015

ABSTRACT

NARTEA, LEONARDO P. JR, PRADO, MARK KENET JO F. Online Management Information System for Sugar Palm Research Information and Trade Center at Cavite State University Main Campus. Undergraduate Thesis, Bachelor of Science in Information Technology. Cavite State University, Indang Cavite. April 2015. Adviser: Ms. Vanessa G. Coronado.

The study was conducted to develop an online management information system that would enhance the managerial tasks and decision- making of Sugar Palm Research, Information, and Trade Center at Cavite State University Main Campus Indang, Cavite, in line with their commitment of strengthening the sugar palm industry in the Philippines.

Rational Unified Process model was the methodology used for the development of the system. It has seven (7) phases namely: Initial Planning, Requirement Analysis Phase, Analysis and Design Phase, Implementation Phase, Testing Phase, Evaluation Phase and Deployment Phase. In the development of the system, the platform used was Windows 8.0, MySQL for the back-end database, and PHP Hypertext Preprocessor served as the server- side scripting language.

The system is comprised of five (5) modules: Account Management module, News and Announcement module, Research and Extension Projects Management module, Records Management module and Report Generation module.

The software underwent unit and integration tests to check system's functional integrity. Also, it underwent software evaluation participated by the employees of SPRINT, university librarians and IT experts. Passing all these, the system was certified to pass all criteria and objectives were all fulfilled.

TABLE OF CONTENTS

Page

BIOGRAPHICAL DATA iii

ACKNOWLEDGMENT v

ABSTRACT vii

LIST OF TABLES x

LIST OF FIGURES xi

LIST OF APPENDICES xii

LIST OF APPENDIX FIGURES xiii

INTRODUCTION 1

Statement of the Problem 2

Objectives of the Study 4

Importance of the Study 5

Time and Place of the Study 6

Scope and Limitation of the Study 6

Theoretical Framework 8

Definition of Terms 10

REVIEW OF RELATED LITERATURE 12

METHODOLOGY 22

Materials 22

Methods 22

Initial Planning Phase 23

Requirement Analysis Phase 23
Analysis and Design Phase 24
Implementation Phase 24
Testing Phase 24
Evaluation Phase 25
Deployment Phase 25
RESULTS AND DISCUSSIONS 26
System Overview 26
Account Management Module 28
News and Announcement Module 29
Research and Extension Records Management Module 30
Records Management Module 31
Report Generation Module 31
Software Evaluation 33
SUMMARY, CONCLUSION, AND RECOMMENDATION 41
Summary 41
Conclusion 41
Recommendations 42
REFERENCES 43
APPENDICES 48

LIST OF TABLES

Table		Page
1	Comparison of related studies	19
2	Overall evaluation of the developed system	34
3	Evaluation of the developed system in terms of its functionality by the participants	35
4	Evaluation of the developed system in terms of reliability by the participants	36
5	Evaluation of the developed system in terms of usability by the participants	37
6	Evaluation of the developed system by the participants in terms of efficiency	37
7	Evaluation of the developed system in terms of maintainability by the participants	38
8	Evaluation of the developed system in terms of portability by the participants	39
9	Overall evaluation of the developed system by the participants	40

LIST OF FIGURES

Figure		Page
1	Theoretical framework of Online Management Information System for SPRINT Center	9
2	Rational Unified Process Model	23
3	Login page of the system	27
4	System dashboard	27
5	Account management page	28
6	Adding new user account	28
7	News and announcements page	29
8	Website of the SPRINT center	30
9	Research and extension projects page	30
10	Records management page	31
11	Reports generation page	32
12	Graphical report generated on the SPRINT Projects Distribution	32

LIST OF APPENDICES

Appendix		Page
1	Interview Reports	49
2	Screenshot of SPRINT center's Facebook Fan Page	53
3	Survey Results	55
4	Survey Questions	59
5	Unit Testing	61
6	Integration Testing	65
7	Software Evaluation Sheet	67
8	Data Dictionary	70
9	Database Schema	78
10	Fishbone, Use Case, and Activity Diagrams	80
11	Gantt Chart	94
12	Sample Source Codes	96
13	CEIT R&E Forms and Letters	109

LIST OF APPENDIX FIGURES

Appendix Figures		Page
1	Fishbone diagram of Lack of Information Dissemination	81
2	Fishbone diagram of Difficulty in Data Retrieval	82
3	Fishbone diagram of Difficulty in Managing Research and Extension Projects Module	83
4	Use case diagram for Research and Extension Project Management Module	84
5	Use case diagram for News and Announcement Module	85
6	Use case diagram for Records Management Module	86
7	Use case diagram for Account Management Module	87
8	Use case diagram for Report Generation Module	88
9	Activity diagram for Research and Extension Projects Management Module	89
10	Activity diagram for News and Announcement Module	90
11	Activity diagram for Records Management Module	91
12	Activity diagram for Account Management Module	92
13	Activity diagram for Report Generation Module	93
14	Gantt Chart	95

ONLINE MANAGEMENT INFORMATION SYSTEM FOR SUGAR PALM RESEARCH, INFORMATION AND TRADE CENTER AT CAVITE STATE UNIVERSITY MAIN CAMPUS

Leonardo P. Nartea Jr.
Mark Kenet Jo F. Prado

An undergraduate thesis submitted to the faculty of the Department of Information Technology, College of Engineering and Information Technology, Cavite State University, Indang, Cavite in partial fulfilment of the requirements for the degree of Bachelor of Science in Information Technology with Contribution No. CEIT – 2014-15-027. Prepared under the supervision of Ms. Vanessa G. Coronado.

INTRODUCTION

Information and communication have always been mattered in agriculture. Ever since people have grown crops, raised livestock, and caught fish, they have sought information from one another (e-Sourcebook, 2011). Technology, specifically internet, brought great advancement in aiding improved communication and collaboration within and outside an organization through web-based applications (Laudon, 2006). One of these is the Online Management Information System (MIS). It provides fitting platform for a large number of masses that interact for common objectives, to share information. Online MIS is a set of components that operate together to achieve a common objective of processing data into a form that is meaningful to the recipient and is of real or perceived value in current or prospective actions or decisions (Abdullah, 2009). It has